

WORLD RESEARCH IN ALCOHOLISM

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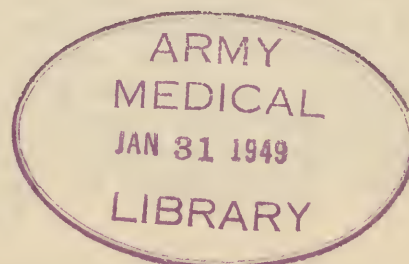
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Authors of research in alcoholism are invited to supply the Research Editor with two reprints of their publication for the LIBRARY OF WORLD RESEARCH IN ALCOHOLISM, along with an abstract indicating purpose, findings, and conclusions. Abstracts should be kept under 100 words for publication in the annotated bibliography.

If you wish to receive future issues of WORLD RESEARCH IN ALCOHOLISM, and have not already mailed your request, please write: State of Illinois, Department of Public Welfare, Division of the Alienist, 912 South Wood Street, Chicago 12, Illinois.

165. BERG, R. L., STOTZ, E., and WESTERFELD, W. W. (Harvard Med. Sch., Boston, Mass.): Alcohol metabolism in thiamine deficiency. *J. Biol. Chem.* 152: 51-8, 1944. 15 ref., 2 tables, 2 fig. "The concentration of blood alcohol decreased at an average rate of 17 mg. %/hr. in pigeons fed a mixed grain diet ad libitum, and 25 mg. %/hr. when they were fed a high carbohydrate diet for 10 days. The rate of alcohol metabolism did not decrease during opisthotonus from thiamine deficiency. Pyruvate administered intravenously was equally effective in increasing the rate of alcohol metabolism during paralytic thiamine deficiency in dogs and after thiamine treatment. Blood pyruvate was elevated in thiamine-deficient dogs, and the lactate pyruvate ratio was decreased. The administration of alcohol to thiamine-deficient dogs decreased the blood pyruvate and increased the blood lactate; after thiamine treatment, alcohol administration caused a parallel fall in both." -- Westerfeld in *Biol. Abstr.*
166. CHALMERS, T. C., MURPHY, T. L., and TAFT, E. B. (Cambridge, Mass.): The incidence, character and course of liver disease in chronic alcoholics as determined by needle biopsy. *J. Clin. Invest.* 27: 528-9, 1948 (abstr.) "Liver biopsies were obtained within a few days of admission to the hospital from 24 patients manifesting incipient or active delirium tremens. Physical and laboratory signs of liver disease were minimal or absent, but histologically all of the 24 livers were abnormal. In 7 biopsied a second time there was improvement after treatment with a regular hospital diet. These patients could be classified according to the Bowman-Jellinek scheme as either steady or intermittent drinkers. The two groups were equal in number and similar in respect to age and duration of alcoholism. The steady drinkers ate at least one good meal a day, were regularly employed and usually entered the hospital because of an infection. The intermittent drinkers neither ate nor worked while drinking, and usually entered the hospital with uncomplicated delirium tremens. As shown in the table, the extent and character of the liver injury seemed to depend on the alcoholic habits of the patient. It is concluded that the liver is abnormal in chronic alcoholics after a bout severe enough to terminate in delirium tremens and that the steady drinker is more likely to show the histological picture of alcoholic cirrhosis."
167. DOMZALSKI, C.A., and WEDGE, B. M. (Queen's Hospital, Honolulu): Elevated serum amylase in alcoholics. *Am. J. clin. Path.* 18: 43-7, 1948. 12 ref., 1 table. "Elevated serum amylase was found in 12 (24%) of 50 chronic alcoholics following recent alcoholic intoxication, but in only one of 50 control patients. It is suggested that elevation of the serum amylase in alcoholics represents evidence of subclinical pancreatitis and that this condition may be the precursor of more severe clinical forms of pancreatitis." -- Authors.
167. FERNANDO, P. B., MEDONZA, O. R., and RAJASURIYA, P. K. (med., Univ. of Ceylon, Colombo, Ceylon): Cirrhosis of the liver in Ceylon and its relation to diet; a review of 102 cases. *Lancet*, London 2: 205-11, 1948. "A history of alcohol was available in 19 (44%) of the 43 patients in whom a detailed dietetic history was available. Of these, 7 took alcohol only occasionally, and 12 (28%) took it daily. Of the 400 controls 28.5% were in the habit of taking alcohol, but 19% took it only occasionally; hence only 9.5% were regular alcoholics. The incidence of alcoholism among the cirrhotics is about threetimes that in the other patients. ... Alcohol, while an important aetiological agent in connection with liver cirrhosis in Europe and America, is comparatively infrequent as a cause of liver cirrhosis in the tropics."
168. GALLEG0, A. (Rockefeller Inst. for Med. Res., New York): On the effect of ethyl alcohol upon frog nerve. *J. Cellul. Physiol.* 31: 97-106, 1948. "A study was made of the effect of ethyl alcohol upon the membrane potential and the excitability

of the frog nerve fibers. Ethyl alcohol is a depolarizing agent; it renders the nerve fibers inexcitable when it is present at concentrations, 1-2M, at which it is able to lower the membrane potential below the critical excitability level. Nevertheless, ethyl alcohol has no demonstrable, direct effect upon the excitable mechanism, since the ability of the nerve fibers to conduct impulses can be restored by raising their membrane potential by means of an externally applied, anodal current. The effect of ethyl alcohol upon nerve begins to become irreversible when the demarcation potential between the treated and the untreated segment exceeds the 12.5 mv value; no sign of recovery will be observed if the demarcation potential is allowed to reach the 20 mv value." - Author.

169. GROSS, M. (physiol., Yale Univ., New Haven, Conn.): The relation of the pituitary gland to some symptoms of alcoholic intoxication and chronic alcoholism. Quart. J. Stud. Alc. 6: 25-35, 1945. 52 ref. "On the basis of an extensive review of the literature it is suggested that many unexplained symptoms of alcoholic intoxication and chronic alcoholism may be related to disturbance of the hormonal secretions of the pituitary gland. While acute effects of alcohol are due to its narcotic action, most diseases of chronic alcoholism have been ascribed to concomitant subvitaminosis. It seems reasonable to relate the unexplained manifestations of chronic alcoholism and symptoms of acute intoxication and the post toxic state either to direct chronic effects of alcohol itself or to the effect of concomitant subvitaminosis on some organ particularly susceptible to the action of alcohol or subvitaminosis. The implicated organ would have to be sufficiently important in the functioning of the whole organism to be capable of influencing the wide range of functions disturbed in chronic alcoholism. This organ would also probably be composed of a large amount of nervous elements, since both the narcotic and subvitaminotic effects of alcohol have been shown to be manifested in the nervous tissue. The organ which meets these requirements is the pituitary gland. Histologic findings reported in the literature support the hypotheses that the pituitary gland is affected in chronic alcoholism and thus may be responsible for some of the symptomatology of this condition, including fatty liver and gastritis." -- Author in Biol. Abstr.
170. HAGGARD, H. W., and JELLINEK, E. M. (physiol., Yale Univ., New Haven, Conn.): Alcohol Explored. 297 pp. Doubleday, Doran & Co.: New York, 1942. \$2.75. "This book constitutes a systematic survey of the established facts essential to a general public understanding of alcohol in its physiological, social, and economic implications. Chapter headings are: the alcohol problem defined; what the world drinks and how much; what happens to alcohol in the body; alcohol and behavior, immediate effects; inebriety; the bodily diseases of chronic alcoholism; alcoholic mental diseases; the outlook. The authors conclude that alcohol as a problem calls for a conscious effort to prevent immoderate use and addiction, to secure rehabilitation of addicts and excessive drinkers, and to promote purposeful education of the public on the effects of excessive use based upon established facts rather than on fanatical or moralistic attitudes. Nor should education against immoderate use be limited to schools, but society as a whole should be led to understand the problem to permit educational, social, medical, and legislative measures that are based upon our present knowledge. Unanswered is the question of why some persons become excessive drinkers and some addicts, and the answer to this, the authors feel, will constitute the major part of the understanding of the entire alcohol problem. 11-page bibliography of selected chapter references and a 9-page index." - Erickson in Psychol. Abstr.
171. HARRIS, R. E., and IVES, V. M. (psychol., Univ. Southern Calif., Los Angeles, Calif.): A study of the personality of alcoholics. Amer. Psychol. 2: 405, 1947. (Abstract). "An experimental group of 19 chronic alcoholics was matched

for age, sex, and estimated IQ with a control group of mixed psychoneurotics. The subjects were given a battery of psychological tests including the Rorschach and the Minnesota Multiphasic. Comparisons were made with the control group and with available data on normal subjects. Each subject in the experimental group was rated by one psychiatrist familiar with all the cases on a trait rating scale designed to summarize clinical features. The results suggest a general neurotic structure for the alcoholics with some specific features which distinguish them from the control group. Outstanding among these is the evidence of considerable intra-individual conflict in the alcoholics with less disturbance in general social emotional relationships than the control group. The Minnesota Multiphasic shows elevations on the Pd scale greater for the alcoholics than for the control group, with significant emphases on the items relating to self-rapport."

172. HOEKENGA, M. T., and KEAN, B. H. (path., Gorgas Hospital, Ancon, Canal Zone): Alcoholic deaths in the Canal Zone, 1904-44, Quart. J. Stud. Alc. 6: 15-24, 1945. 19 ref. "From 1904-44, there were 14,308 autopsies performed at the Board of Health Laboratory of Gorgas Hospital; 54 deaths (0.37%) were attributed to ethyl alcoholism. ... Although U.S.A. whites made up only 5.7% of the total number of autopsies, they contributed 46.3% of the deaths from ethyl alcoholism. ... " -- Hoekenga in Biol. Abstr.
173. HORWITZ, O. (med., Univ. Pa. Sch. of Med., Philadelphia, Pa.): Certain pharmacological properties of alcohol, nicotine, and caffeine. J. Aviat. Med. 19: 179-85, 203, 1948. 21 ref., 2 tables. Discussion of systemic action of alcohol on central nervous system, cardiovascular system, gastrointestinal tract, liver, and kidney.
174. JELLINEK, E. M. (Sch. of Alc. Studies, Yale Univ., New Haven, Conn.): Notes on the first half year's experience at the Yale Plan Clinics. Quart. J. Stud. Alc. 5: 279-302, 1944. "Two diagnostic and guidance clinics for alcoholics received 174 patients during the first 6 months of operation. Schizophrenia, psychoneurosis; psychopathic personality, epilepsy or feeble-mindedness was diagnosed in 17% of the 145 males. 78% were between 30 and 49 years of age; 66.2% were married (1 out of 5 of these was not living with wife), and 27.6% were single; 35.5% were skilled workers, 32.4% unskilled, 17% white collar, 7.5% professional and executive workers. Of 85 patients referred for guidance, 35 dropped out after 2-3 interviews, the inebriety of 45 was checked, and 5 showed no signs of improvement. A significantly higher rate of success was achieved with those in skilled and higher occupations than with those labeled 'unskilled,' and in the former group the status 'married' appeared to be an additional favorable characteristic for success. It is believed that the clinics have been in operation too brief a time to justify drawing conclusions." -- Jellinek in Biol. Abstr.
175. JETTER, W. W., and McLEAN, R. (path., Harvard Med. Sch., Boston, Mass.): Poisoning by the synergistic effect of phenobarbital and ethyl alcohol. An experimental study. Arch. Path. 36: 112-22, 1943. 5 fig. "Alcohol and phenobarbital were administered to rats in sublethal doses by intraperit. and subcut. inj., respectively. When a maximum sublethal dose of alcohol (8 mg./g. body wt.) and of phenobarbital (0.20 mg./g. body wt.) were combined, death was produced regularly. Half the maximum sublethal dose of either drug when combined with the full sublethal dose of the other produced death in 2/3 or more of the cases. A combination of half quantities of both drugs resulted in a degree of narcosis greater than was observed with this dose of either drug alone. Death resulted in an occasional case. These exptl. results confirm an impression obtained from actual medico-legal cases that a fatal synergism may develop inci-

dent to a combination of otherwise non-fatal amts. of ethyl alcohol and a barbiturate." — Jetter in Biol. Abstr.

176. KAREL, L., and FLEISHER, J. H. (Toxicology, Army Chemical Center, Edgewood Arsenal, Md.): Gastric absorption of ethyl alcohol in the rat. Am. J. Physiol. 153: 268-76, 1948. 22 ref., 1 ill., 2 tables. "(1) Hydrostatic or 'filtration' pressure apparently affects the absorption of ethyl alcohol from the stomachs of rats. Ethyl alcohol may diffuse through the walls of the nonexcised stomach and be absorbed by the peritoneum. The mean percentage of alcohol absorbed in 20 minutes from stomachs ligated at both cardia and pylorus and injected with one ml. of 23.8% by weight (5M) alcohol per 200 grams of body weight was as follows: a) stomach enclosed in abdomen, 41.7; b) in situ in open abdomen, 38.0; and c) exteriorized on the sutured abdomen, 38.6. In the cannulated animals, the respective values were 41.9, 22.9, and 24.6. Mean ventricular blood levels for the corresponding series of observations were, in mg. per cent, 48, 47 and 41 for the noncannulated and 46, 33, and 29 for the cannulated. (2) That gastric mucosa may metabolize alcohol is suggested by experiments performed with activated and deactivated mucosa. Evidence of metabolism of alcohol by the gastric walls minus mucosa was entirely lacking, but protein-binding and possible adsorption accounted for about 7% of nonrecoverable alcohol. (3) Presumptive evidence indicates that under the conditions of these experiments, about 14.4 mgm. of ethyl alcohol per 100 grams of body weight may be metabolized by the Wistar rat in 20 minutes." — Author.
177. L., J. L.: Is there a public health problem associated with alcohol? Canad. J. Pub. Health 39: 30, 1948. A suggestion that a Canadian study committee be set up as a long-term project to determine whether a social health problem exists in Canada in the matter of alcohol addiction.
178. LOLLI, G. (med. dir., Yale Plan Clinic, New Haven, Conn.): Treatment of alcohol addiction. Postgrad. Med. 4: 26-8, 1948. "... we see about 30 new patients each month. The clinic is free and patients belong to every walk of life. About 50% who contact us drop out of the picture after two or three interviews. Of the remaining 50%, about half achieve permanent sobriety after a period of three, four, and sometimes six months. The other half keep on drinking. However, we feel that even in these cases the clinic has had a marked impact on them. It appears that more often than not the drinking episodes are spaced and sometimes shortened, that there is a better adjustment of the addictive drinker to his family, to his job, and more important than anything else, to himself." — Author.
179. MARSHALL, C. (NP div., Dept. of Pub. Hlth., Halifax, N.S., Can.): Work of the neuropsychiatric division of the Department of Public Health. Nova Scotia Med. Bull. 27: 140-8, 1948. "... We treat more alcoholics in mental hospitals in Nova Scotia than they do in Ontario. Do we drink more? Do we become mentally unbalanced more easily under the influence of liquor, or are alcoholics treated in institutions other than mental hospitals in Ontario, and so do not appear in their mental hospital statistics? Or is the calculated rate only a temporary figure which is only an accident of one year, and not a permanent state? These and other questions can only be answered when we develop a more adequate record and statistical system. And this is another of the functions of the neuropsychiatric division." — Author.
180. MILLER, M. M. (St. Elizabeth's Hospital, Washington, D. C.): Ambulatory treatment of chronic alcoholism. A clinical study. J. Amer. med. Ass. 120: 271-5, 1942. Miller stresses a 3-point procedure in the ambulatory treatment of alcohol addiction: amphetamine sulfate medication, psychotherapy, and social re-

orientation and rehabilitation. "A study of 513 patients (from the Cleveland Municipal Court, all arrested for repeated public intoxication) who were treated and observed over a period ranging from 4 to 14 months revealed that: 1) Of 487 patients contacted 397, or 81.4%, were abstinent. 2) Comparison of 167 ambulatory patients who had been observed for a nine-month period with an equal control group of untreated subjects revealed that 25% of the treated group as compared with 42% of the control group were rearrested. 3) There were 191 rearrests in the untreated group as compared with 46 for the treated group. 4) The percentage of patients receiving relief dropped from 39.5 before treatment to 18 after treatment. 5) The present program of treatment for chronic alcoholism was effective in significantly reducing the social cost of this disorder. 6) In my opinion, amphetamine sulfate proved to be of considerable value as an adjunct in the treatment of this disorder. 7) This study has demonstrated the great value of closer cooperation between the psychotherapist and the courts. In many instances the proper exercise of the right of sentence vested in our courts can be of great value as a therapeutic measure rather than a socially detrimental instrument, as has frequently been the case in the past."—Author.

181. _____: Prognosis in periodic and daily inebriates. Quart. J. Stud. Alc. 5: 430-3, 1944. 2 ref., 2 tables. "Alcoholics generally have been classified as daily or intermittent drinkers. There are certain fairly distinct differences in psychic reactivity and mood swing in these two different types of drinkers which aid in explaining their respective differences in manner of drinking. These differences in personality appear to be of significant prognostic value in selecting patients for treatment. E.g., it was observed that in a group of 513 alcoholics, the incidence of relapse following treatment was more than twice as great in the daily drinking as in the periodic drinking group (25.3% to 11.8%), thus indicating the better therapeutic outlook for the latter group." — Author in Biol. Abstr.
182. MIRSKY, I. A., and NELSON, N. (May Inst. for Med. Res., Jewish Hospital, Cincinnati, Ohio): The influence of the pancreas and the liver on the oxidation of ethyl alcohol. Amer. J. Physiol. 127: 308-14, 1939. In an attempt to determine the validity of the hypothesis that the oxidation of ethyl alcohol is dependent upon the simultaneous oxidation of carbohydrate, a series of studies were performed with dogs, rabbits, and man. Concludes that the liver is the principal factor responsible for alcohol utilization, and that insulin is not essential for this process. "A study was performed in which the rate of alcohol removed from the blood was det. in rabbits immediately after the ablation of various amts. of liver. A striking relationship was observed between the per cent of liver removed and the amount of alcohol utilized, the coefficient of correlation between them being above -0.9. This suggests that the oxidation of alcohol is dependent upon the amount of normal liver present in the organism. In accord with this view is the observation that the inhalation of chloroform by dogs for various short periods of time results in a definite decrease in the rate of alcohol utilization. Preliminary observations in man also indicate a relationship between liver function and ethyl alcohol oxidation."
183. ROSENBAUM, M., and MERRITT, H. H. (NP., Cincinnati General Hosp., Cincinnati, O.): Korsakoff's syndrome; clinical study of the alcoholic form, with special regard to prognosis. Arch. Neurol. Psychiat. 41: 978-83, 1939. "An analysis of 50 cases of Korsakoff's syndrome associated with chronic alcoholism is presented, and an attempt is made to determine the factors of significance in regard to prognosis. Sex: the mortality rate was much higher for women (56%) than for men (38%). Age: There was a progressive rise in the mortality rate for each decade: third, 25%; fourth, 38%; fifth, 44%; and from the sixth to the eighth decade, 50%. Duration of symptoms: In 25 patients the duration

of mental and physical symptoms before entrance to the hospital was known. Six of the eight patients (75%) with mental symptoms of less than one week's duration and 6 of the 12 patients (50%) with physical symptoms of less than a month's duration died. Behavior: Practically all patients were admitted in a restless, disturbed state or in coma. ... only 5 patients of the 22 who died became quiet and cooperative within a few days or weeks after admission. Severity of the polyneuritis: ... did not seem to have any significant relation to the mortality rate. The mortality rate based on the severity of the neuritis was: 11 of the 22 patients (50%) with severe neuritis and 11 of the 28 patients (40%) with mild or moderate neuritis died. Laboratory data: Ten of the 13 patients with a white cell count greater than 11,000 per cu. mil. on admission died, as did all 3 of the patients with a red cell count below 3,000,000. The 2 patients with the nonprotein nitrogen content of the serum greater than 45 mg. per hundred cu. cent. died. Three of the 6 patients with a cerebrospinal fluid pressure greater than 200 mm. and 7 of the 10 patients with a protein content greater than 45 mg. per hundred cu. cent. of fluid died. Treatment: Intensive dietary and vitamin therapy apparently is of great significance in regard to prognosis as to life and complete recovery. It is not the only factor, however, since only 11 of the 22 patients who received no special therapy died, but it undoubtedly was a life-saving measure in the case of other patients who recovered." — Author.

184. _____, PIKER, P., AND LEDERER, H. (psychiat., Univ. of Cincinnati, Ohio): Delirium tremens. A study of various methods of treatment. Amer. J. Med. Sci. 200: 677 - 88, 1940. 22 ref., 5 fig., 2 tables. A review of results of treatment in 234 consecutive cases of delirium tremens admitted to Psychiatric Pavilion of Cincinnati Gen. Hosp. from July 1, 1935, to Feb. 1, 1940. These cases all showed "a history of alcoholism with an acute psychosis characterized by disorientation, hallucinations, apprehension, tremors, insomnia, anorexia, and general signs of toxicity. The similarity in results (from different treatments) suggests that the treatments be examined for factors common to all of them ... hospitalization, paraldehyde, lumbar puncture ... and the attitude toward these patients on the part of the department personnel. ... Delirium tremens has been for several years the chief research problem of the department. As a result much time is given to delirium tremens patients, with the interest of the research clinicians permeating everyone involved. The esprit de corps that has developed is apparent in the general reaction of personal defeat on the part of the entire personnel when one of these patients dies. ... Our results seem to indicate that regardless of what sort of treatment procedure is used, and so long as no measures are instituted which are injurious, adequate general medical and psychiatric care should serve to keep the mortality rate in uncomplicated delirium tremens down to a minimum. We have been unable to find, thus far, a specific therapeutic medicinal procedure for delirium tremens. ... psychotherapy merits more consideration than it has received until now. In the light of our low mortality figures it seems to us that the problem in delirium tremens at this time is not so much one of discovering the proper method of therapy as it is an elucidation of the etiologic factors involved."
185. WESTERFELD, W. W., and DOISY, JR., E. A. (bio-chem., Syracuse Univ. Coll. of Med., Syracuse, N.Y.): Alcohol metabolism as related to the production of thiamine deficiency. Jour. Nutrition 30: 127-36, 1945. 27 ref., 3 tables. "The isocaloric substitution of alcohol (15.5% of the total calories) for an equivalent amt. of fat or carbohydrate in a thiamine deficient diet delayed the onset of opisthotonus and death in pigeons. The thiamine-sparing action of fat was confirmed." — Author in Biol. Abstr.